



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,219	04/10/2001	Eric Klinker	21089000100	1676
22830	7590	03/28/2005	EXAMINER	
CARR & FERRELL LLP 2200 GENG ROAD PALO ALTO, CA 94303			TSEGAYE, SABA	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/833,219

Applicant(s)

KLINKER ET AL

Examiner

Saba Tsegaye

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3,5,7-9,11-14,16-25 and 28-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-25 is/are allowed.
- 6) ☒ Claim(s) 3,5,7-9,11-14,16-18 and 28-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to the amendment filed on 10/18/04. Claims 3, 5, 7-9, 11-14, 16-25 and 28-33 are pending. Currently no claims are in condition for allowance.

Claim Rejections - 35 USC § 102

2. Claims 16, 17 and 31 is rejected under 35 U.S.C. 102(e) as being anticipated by Ben Nun et al. (US 6,831,893).

Regarding claim 31, Ben Nun discloses a method for passively analyzing data flow to maintain a traffic service level for data communicated by a computer network having a source, the computer network coupled to at least one of a plurality of networks, each of the networks includes a plurality of paths (230, 240) for transporting the data communicated to a destination (column 7, lines 9-67), the method comprising:

examining a first plurality of packet headers for a first plurality of packets that have been routed to the destination along a first path (230) to determine data flow characteristics for each of the first packets along the first path (column 6, lines 24-45; column 7, lines 9-12; column 16, lines 22-25);

combining the data flow characteristics for each of the first packets into a traffic flow for the first path (column 10, lines 9-12);

examining a second plurality of packet headers for a second plurality of packets that have been routed to the destination along a second path to determine data flow characteristics for each of the second packets along the second path (column 10, lines 22-60; column 16, lines 26-30);

Art Unit: 2662

combining the data flow characteristics for each of the second packets into a traffic flow for the second path (column 12, lines 15-27);

forming an aggregate service level associated with the destination from the traffic flow for the first path and the traffic flow for the second path (column 7, lines 36-49; column 13, line 44-column 14, line 15);

receiving a packet to be routed to the destination (column 13, line 44-column 14, line 15); and

routing a packet to the destination based at least in part on the aggregate service level (column 12, lines 29-67).

Regarding claim 16, Ben Nun discloses the method further comprising filtering one or more data packets according to a filtering criterion; and removing the one or more data packets from the network (column 9, lines 41-65).

Regarding claim 17, Ben Nun discloses the method wherein the packet header includes a source address and a destination address (see Figs. 1 and 3).

Claim Rejections - 35 USC § 103

3. Claims 3, 5-9, 11-14, 28-30, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Host (US 2004/0258226) in view of Ben Nun et al. (US 6,831,893).

Regarding claims 14, 28, Host discloses, in Fig. 6, a method for maintaining a traffic service level for data communicated by a computer network having a source (communication

Art Unit: 2662

device), the computer network coupled to at least one of a plurality of networks (packet switched network), each of the networks includes a plurality of paths for transporting the data communicated to a destination (B2, B2, C1, C2), the method comprising:

comparing a data flow characteristics of a first path to one or more performance metrics to determine whether the data flow characteristics of the first path satisfy the performance metrics (the M/R system analyzes the call data for channel quality; if the quality of path over which the packets containing call data travel degrades to an unacceptable level (0072; 0107));

indicating a service level violation when the data flow characteristics of the first path fail at least one of the performance metrics (if the quality of path over which the packets containing call data travel degrades to an unacceptable level (0072; 0109-0110));

comparing the data flow characteristics of the first path to data flow characteristics of a second path to determine an optimized path, wherein the data flow characteristics of the second path are determined by transmitting a probe along the second path to the destination to determine the data flow characteristics of the second path; and routing a second packet to the destination along the optimized path (page 5, 0071-0072; page 8, 0114).

Host further discloses that the M/R system continually monitors the characteristics of the various paths between each interface. This allows the M/R system to analyze and select the most desirable path to route and/or re-route packets. Packets are routed in various paths and manner by altering the content of the packet header (0115).

However, Host does not expressly examining a packet header of a first packet that has been routed along a first path to the destination to determine data flow characteristics of the first path.

Ben Nun teaches a classifier unit that classifies the data packets (by evaluating the information contained in the data packet header), associates the classified data packets with a particular data flow (column 6, lines 24-65; column 7, lines 36-49).

It would have been obvious to one ordinary skill in the art at the time the invention was made to add a system that examine a packet header to determine data flow characteristics of a path to the system of Host. One ordinary skill in the art would have been motivated to do this because it would provide a system that can efficiently classify and process the data packets and monitors optimal (alternate) routing paths to maintain communication quality.

Regarding claim 3, Host discloses the method further comprising: storing the data flow characteristics for each of the plurality of paths as statistical data; and retrieving the statistical data (page 9, 0116).

Regarding claims 5 and 7, Host in view of Ben Nun discloses all the claim limitations as stated above. Further, Host discloses that if the quality of the path over which the packets containing call data travel degrades to an unacceptable level, the M/R system re-routes the call to a better path. However, Host in view of Ben Nun does not expressly disclose a routing table.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a routing table into Host in view of Ben Nun system. The benefit of a routing table is that routing and topology information of the routing domain will be maintained.

Art Unit: 2662

Regarding claim 8, Host discloses the method wherein the optimized path is an egress path (page 5, 0072).

Regarding claim 9, Host discloses the method wherein one of the pluralities of additional paths is a default rout path (page 5, 0072).

Regarding claim 11, Host discloses the method wherein the probe includes information about the network latency of second path from the source to the destination (page 8, 0108).

Regarding claim 12, Host discloses the method wherein probe includes information about the network loss of the second path from the source to destination (page 8, 0108).

Regarding claim 13, Host discloses the method wherein the probe includes information about network jitter of the second path from the source to the destination (page 8, 0108).

Regarding claim 14, Host discloses all the claim limitations as stated above, except for determining whether the second packet is a specific traffic type and if so, classifying the second packet as the specific traffic type wherein the specific traffic type is used in routing the second packet.

Ben Nun teaches determining whether the second packet is a specific traffic type and if so, classifying the second packet as the specific traffic type wherein the specific traffic type is used in routing the second packet (column 11, lines 40-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a method that determines whether the second packet is a specific traffic type and if so, classifying the second packet as the specific traffic type wherein the specific traffic type is used in routing the second packet to the method of Host. One ordinary skill in the art would have been motivated to do this because it would provide a system that can efficiently classify and process the data packets and monitors optimal (alternate) routing paths to maintain communication quality.

Regarding claim 29, Host in view of Ben Nun discloses all the claim limitations as stated above, except for the probe comprises one of a Sting probe, a lightweight TCP-based probe and a traceroute probe.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use on of a Sting probe, a lightweight TCP-based probe and a traceroute probe in the monitoring method of Host in order to provide route information and to establish a reliable connection between two points.

Regarding claim 30, Host discloses the method further comprising comparing the data flow characteristics of the first path to data flow characteristics of a plurality of additional paths, wherein the data flow characteristics of each of the plurality of additional paths are determined by transmitting at least one probe along each of the plurality of paths to the destination (page 5, 0071).

Art Unit: 2662

Regarding claims 32 and 33, Host in view of Ben Nun discloses all the claim limitations as stated above except for computer readable medium.

Those skilled in the art will appreciate that physical storage of the sets of instructions physically changes the medium upon which it is stored so that the medium carries machine-readable information.

Therefore, the system of Host in view of Ben Nun could be modified to use a machine-readable medium.

It would have been obvious to one ordinary skill in the art at the time the invention was made to add a computer readable medium including computer-executable instructions into the system of Host in view of Ben Nun. The benefit using computer-readable storage medium is that programs can be changed and upgraded and new features are added easily than hardware changes.

4. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ben Nun et al.

Ben Nun discloses all the claim limitations as stated above. Further, Ben Nun discloses receiving a service level metric and interpreting whether the service level metric is violated (column 9, lines 41-65). However, Ben Nun does not disclose providing feedback for use in resolving such a violation.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a method that provides feedback for resolving a violation into the method of Ben Nun. One of ordinary skill in the art would have been motivated to do this because providing feedback allows the transmitter to adjust the service level metric accordingly and retransmit.

Allowable Subject Matter

5. Claims 19-25 are allowed.

Response to Arguments

6. Applicant's arguments with respect to claims 3, 5, 7-9, 11-14, 16-25 and 28-33 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Art Unit: 2662

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saba Tsegaye whose telephone number is (571) 272-3091. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ST
March 17, 2005


JOHN PEZZLO
PRIMARY EXAMINER